

Title (en)

Tension limiter for safety belt restraint systems.

Title (de)

Kraftbegrenzer für Sicherheitsgurt-Rückhaltesysteme.

Title (fr)

Limiteur de tension pour systèmes de retenue à ceinture de sécurité.

Publication

**EP 0422410 B1 19940525 (DE)**

Application

**EP 90117721 A 19900914**

Priority

DE 3933721 A 19891009

Abstract (en)

[origin: JPH03243447A] PURPOSE: To achieve miniaturization by constituting a force limiter to be inserted in a path of the flow of force of a safety belt restraining device through two attaching member by dispersedly arranging a plurality of roller elements between a shoulder part of a rod to be housed in a cylinder and the cylinder. CONSTITUTION: A force limiter is formed by housing a rod 12 in an aluminum- made cylinder 10, and an external thread 32 to which a second attaching member is to be fixed is provided on one end 14 of the rod 12, projecting from the cylinder 10. A piston-like head 16 is provided on the other end of the rod 12, and a plurality of roller elements (steel balls) 22 are dispersedly arranged in the circumferential direction in a free space formed between an annular shoulder formed of the head 16 and a transient section of a cylinder head to an enlarged hole part 20. An external thread 24 is provided on the end of the cylinder 10, facing the head 16, and a first attaching member 28 is fixed by clamping a nut 26 to be screwed to the external thread 24.

IPC 1-7

**B60R 22/28**; **F16F 7/12**; **B60R 22/00**

IPC 8 full level

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CPC (source: EP US)

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US5358275A; EP0557863A3; US5480190A; US6024383A; WO9616843A1

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**EP 0422410 A2 19910417**; **EP 0422410 A3 19920226**; **EP 0422410 B1 19940525**; DE 3933721 A1 19910411; DE 59005805 D1 19940630; ES 2022083 A4 19911201; ES 2022083 T3 19941001; JP H03243447 A 19911030; JP H0818532 B2 19960228; US 5069482 A 19911203

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